

ICTRP

**Public Awareness of ICT in Egypt
Specialist Report**

by
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1. Analytical Discussion and Findings

Problems and Issues

The Egyptian local market is faced with many challenges which greatly influence the potential success of developing ICT products, services and businesses. One primary consideration is the current infrastructure in place to support the development of wide spread use of ICT technologies. The teledensity in Egypt is 8 lines per 100 inhabitants. The rate of growth in teledensity is out by the rate of population growth. All telephone service in the country is operated by Egypt Telecom, a state owned monopoly. Recently, two licenses were approved for private sector companies to establish cellular phone service. Although cell phones cost almost as much as computers, their use has grown quickly. They still, however represent a small portion of total phone use.

ICT businesses in Egypt are hoping that the government will take the lead in creating a market for hardware, software, and services. The National Plan for the MOCIT also sees the government as a prime player for creating demand. However, while most companies wait for the government to begin ordering ICT goods, a few businesses have looked overseas to begin developing their own markets.

There may also be resistance to ICT technologies from within firms due to fear of what the change could bring. Currently much of the accounting is done by hand and the accountant manages the companies financial information. With the introduction of ICT, the financial information is available right off the computer. Some fear this loss of control within the institution and resist the any pressures to change.

Likewise upper management, in many cases, is not accustomed to sharing responsibility within the institution and the dynamic nature of management with ICT represents a break with the old way of doing business.

In terms of E-Commerce, there is no history in Egyptian culture to support an evolutionary move to E-Commerce. Egypt has not had a mail order model of business to draw from. Similarly there are no consumer protection laws which would limit liability in credit card fraud or allow for E-signatures. There is a critical mass needed to be successful in E-commerce and the recent history of current Egyptian society does not make the acquisition of that critical mass an easy step.

In terms of access, Egyptian society is technologically poor with only 200,000 computers in the country. Public libraries and other access points common in some other countries do not have computers available to the public in Egypt. There has been success with cyber cafes but these are few in number and concentrated in urban areas. The public view of technology then is limited due to a lack of exposure or access to telephones computers and other components of ICT.

The wait for the government to take the lead, the resistance to technology due to the perceived changes it will bring, the avoidance of technology due to fear, and the lack of a historical model within the culture on which to base e-commerce are all influenced by the perceived business

environment. It is believed that there is no need to be competitive. Long time family businesses will remain successful using the same business practices that they have used up till now. This compounded by a lack of awareness and interest in the value of investments in efficiency.

Additionally, the coverage of and access to ICT is concentrated in the higher socio-economic levels of urban areas. This leaves disadvantaged sectors of the population, both urban and rural, unfamiliar with the technology and contributes to the widening information and digital gaps.

Opportunities and Possible Interventions

Library support

There are approximately 1,300 Libraries in Egypt. Among these there are over 9,000 librarians who have university degrees. There is an average of seven employees per library with larger urban libraries having more. Of the more than 1,300 libraries, 119 are on the library electronic network and 34 have websites on the internet. This is a good resource to start with, an educated audience already beginning to develop an electronic network and already sharing information between them. However, among these libraries, those that have computers generally use them for library management and cataloguing. Libraries can become sites for community access to computers and the internet through this project.

Telecenters

As technology develops people who use technology find themselves having to learn new systems and software while people who are excluded from technology are generally not even aware that they are falling further behind. Computer and internet access can bring information to communities but more importantly they can become tools for the community to gain a degree of control and management over their own destinies. International NGO's such as Save the Children partnered with local NGO's and multilateral development agencies such as UNDP have expressed intentions to begin or have already begun pilot projects in the establishment of Telecenters in Egypt. Success or failure of these activities will depend on the ability of these entities to develop and carry out long term business plans focused on sustainability within the local markets.

Targeted Awareness Activities and Workshops

As the world goes deeper into Information and Communication Technologies, businesses will be exposed to off shore venders and clients who have a different way of operating. Their will be a desire to become or remain competitive but there may not be the knowledge on how to do that. Likewise new businesses will create a demand to grow and participate in the modern market. The demand to be competitive translates into a demand for knowledge about new ICT technologies and how to acquire and use them. This demand can be stimulated by a series of targeted awareness activities and workshops. Once the demand is created and partially filled the private sector will continue to meet the demand through a push for goods, services and training. A series of awareness activities and workshops would stimulate this market.

Awareness Campaign

In Egypt there are many private sector NGO's related to the business community and in some way striving to make businesses more competitive. In the public sector there are institutions and individuals who have voiced the desire that Egypt incorporate ICT into the public and private institutions in order to become more efficient and competitive. The country has witnessed the recent formation of the Ministry of Communication and Information Technology (MOCIT). The Minister of the MOCIT has said that he will promote the transition to e-government. The private sector has, through various business associations and private individuals, expressed an interest in e-commerce, e-government and ICT. Development programs by national and international institutions have expressed interest in using ICT to improve the functioning of their projects and to improve employability of their clients. There is a perceived need in Egypt to create a market for ICT goods and services and to incorporate these goods and services into the public and private sector. This interest by key individuals implies fertile ground exists for the broad promotion of ICT across several different audiences in Egypt. With wide spread promotion of ICT there will be an increase in the adoption of specific technologies. This adoption will speed processes in the public sector and help the private sector become more competitive.

2. Key Policy Issues

NGO's which this activity will partner with or develop relationships with include: AMCHAM, ABA, EHITA, and others related business. In the Telecenters sub-activity this activity will form linkages with the USAID NGO Project. Linkages will also be made with private sector companies both national and international.

Linkages with Egyptian government institutions will primarily be with MOCIT and others identified through that partnership.

Through the library sub-activity the potential exists to partner with the Integrated Care Society, the reading program sponsored by the First Lady.

3. Recommendations

Activities

Support to Public Libraries

A library support project will be created which will assist libraries in becoming ICT public access points. Each library, according to the size of audience it serves, will be given two to ten computers, a printer and internet connections. The computers would be loaded with basic business software (word processing, spreadsheets, graphics package and basic page set-up) and additional software would be available from the librarians. Two librarians would be given training in the software packages they have available for the public as well as computer use and trouble shooting. These

librarians would serve as on site specialists for training and trouble shooting the system. Their work would also be supplemented by currently enrolled university students on internship programs with their Universities. The librarians would also receive training in small business development and management and would be responsible for developing and implementing a business plan for sustainability of the public access computers in their charge. Participating librarians would form a "public access computer librarian" group to support each other and to share problems and solutions as they develop their public access computer sites and plan for and realize sustainability.

Possible income generators for these public access computers would be a fee per hour of usage or an additional connection fee for internet use. Some more creative services could also be developed such as educational software which could be rented, computer classes to learn software applications, and classes taught by teachers who use the computer to augment their lesson presentation and split the income with the library. Other uses and opportunities will develop as the resource becomes known and people begin to understand the potential of the computer workstations. Recognition will be given to the most creative use of ICT and the most innovative step toward sustainability in an annual event. Many of these activities may provide opportunities for income generation for the maintenance and growth of the public access computer systems.

Outcome

A large number of educated and change oriented people have access to and are using computers and current ICT software to improve their competitiveness and the lives.

Inputs

100 Libraries no more than 40% in major urban settings.

- A. Average five computers per library @ \$5,000 ea. complete with office suite, network hardware and software, and internet connections.
- B. Additional software packages for desktop publishing, graphics, language education, and other educational software.
- C. Specialized small business training for 200 librarians.
- D. Training in computer use and troubleshooting for 200 librarians.
- E. Training in software packages acquired by libraries for 200 librarians.
- F. Annual follow-up training for 200 librarians.
- G. Local service contracts for each library @ \$1,000/year.
- H. Technical consultant to coordinate establishment of project; 5 years.
- I. Seed money for technical library for each library access site; \$2,000 ea.

Critical Assumptions

It is assumed that the libraries and librarians participating in this activity will maintain the computer systems in good working order and accessible to the public. It is also assumed that fees collected for use or services provided through these computers will be placed in a discrete fund and used only for the maintenance and growth of the public access computer system. The network of public access computer libraries may work together to grow the system but funds will not be used by the libraries for other purposes. It is assumed that librarians charged with managing the public access computers in their libraries will be given the authority and autonomy necessary to do so.

Telecenters

A Telecenter system should be set up in a way that shares resources while making technology available to disadvantaged populations. These populations reside in both rural and urban settings and are on the losing side of the digital divide. If given the opportunity to be exposed to and learn to use technology, the chances of incorporating into life improving strategies is greatly increased.

Because of the newness of these kinds of projects a pilot project should be carried out in the first 18 months. Midway through the second year an evaluation of the pilot should be carried out and, based on these results, the pilot should be adjusted and new projects planned and implemented. A third Phase of the project will also follow.

Pilot project: One option for development of the pilot project would consist of two hubs with internet connections. Each hub would support at least ten remote sites. This would create two local networks with connections to the internet. The remote sites would be connected to the hub either through hard wire or by radio. A local NGO would manage the system under a business plan focused on long term sustainability. Each remote site would have basic business software with additional titles available through the hub.

Each hub would have a systems technician responsible for the smooth operation of the entire network dependent on that hub. Each remote site would need only a sight manager with enough training to manage minor problems and with the ability to communicate with the network manager to take care of larger problems. A project manager will be assigned to each hub and be responsible for implementing the business plan, evaluating progress, arranging additional training if needed and achieving sustainability.

With this scenario the need for higher trained personnel and more expensive equipment is shared by the remote sites through their support of the central hub. These networks also present opportunities for internships with national universities.

Entrepreneurial thinking should be promoted and competition between remote sites for the most creative use of the telecenters should be held.

Each telecenter should have at least three computers and a printer as well as a telephone voice line. Some of the remote centers should experiment with a wall mounted computer and touch screen software. This computer would be mounted so that people would have access from outside the center. This arrangement would allow people to approach the technology in a safer environment. As fear of the technology is replaced by curiosity, people will move from the outside touchscreen to inside the center. The remote centers should probably be based on notebook machines since these are more durable and resistant to rough treatment and harsh environments.

Each hub with its remote centers will operate under a business plan focused on the sustainability of the network. Local arrangements for creative projects will be shared throughout the network for the purpose of attaining this goal. Some possible uses of the telecenters would be:

- Interactive education programs in basic English and other topics.
- Computer support to teacher for directing extension education programs (funds generated shared between teacher and remote center).
- Recording of bio-resources used by locals to protect local ownership and preserve

indigenous knowledge.

- Internet access and training to connect communities with outside resources and markets.

At the end of the first 18 months of operation, the pilot project will be evaluated for the purpose of designing the second phase of the project. At the end of the second phase a similar evaluation will be carried out for the purpose of making any needed adjustments in Phases I and II and to plan and initiate Phase III.

There are proposals and pilot projects being presented and undertaken to utilize post offices (e-government), youth centers (youth in general), schools (education), and others. This activity will compliment these other efforts by making technology available to disadvantaged populations. These centers would be fundamentally different because it is access oriented and will potentially have a direct impact on the daily lives of the users.

Outcome

Local NGO's more effective in their use of ICT and their client groups becoming more technologically literate there by increasing there competitiveness in the commercial and employment markets.

Inputs

Phase I

- Two servers for the hubs (hardware and software for the network and local internet connection).
 - Seventy notebook computers for the two networks. (35 @ \$5,000 ea. to include office suite software, network hardware and software, possible wireless connection equipment, per local network)
 - Solar battery chargers and batteries for sites with inaccessible or unreliable electricity.
 - Basic computer training for 20 remote site operators.
 - Small business training for network project managers.
 - Any necessary training for the network managers to familiarize them with the specific equipment and software.
 - Start-up salaries for two project managers, two network managers and approximately 20 remote site managers.
- (salary support could be reduced to 80% after first 18 months and then 20% per year for the remaining four years as a strategy to push the projects toward self-sustainability).

Phase II

Phase II will begin at 20 months into the project. Depending on the success of the pilot project, 8 addition local networks will be set up. A major consideration for their success will be the existence of a necessary critical mass of user support to sustain each local network. It may be necessary to add computers to the remote stations in the pilot project to reach this critical mass for sustainability. Likewise it may be necessary to create larger networks in the second phase to reach critical mass.

Phase III

Phase III will begin at 20 months into the project. Based on the experience from Phase II an additional 8 local networks will be set-up. Business plans incorporating lessons learned from the Pilot Project and Phase II will be prerequisites for Phase III.

Critical Assumptions

Local NGO's with ties to U.S. or international NGO's will have the interest and the capacity to manage the project.

Targeted Awareness Activities and Workshops

This activity will be carried out as an integral part of the awareness campaign.

An entrepreneurial workshop unit will be set-up which will design and carry out awareness activities and workshops. Their first responsibility will be to complete a social marketing study on awareness needs and opportunities in the business community and to develop a business plan. The unit will consist of a project manager and two technical teams. Each team will consist of an ICT specialist, a business management specialist and a logistics specialist. In the first eight months they will carryout a social marketing study and implement two events and from the eighth month on they will implement one event per month. These events will target upper and middle management, technical people, and small to medium businesses as well as some larger businesses. The focus will be on integration of ICT into daily business operations. Management skills will also be incorporated into the events. Successful uses of ICT will be spotlighted at each event.

These events will be planned as complementary but each event will also stand on its own. The events will be carried out in a variety of venues and will initially take place in the principle economic centers of the country. Depending on need, established by market studies carried out by the project, the events will be made available though-out the country.

Participants will pay a fee for attending and will receive a promotional package on ICT compiled from companies doing business in Egypt. Inclusion in the promotional package could also be fee based.

A "Traveling shows" to present ICT to different audiences and to promote the workshop series will be created on CD's. Multi media capable laptops and small video projectors will be taken around to large medium and small businesses as well as association meetings and other activities where potential participants for the workshop series may be part of the audience. The multi media programs can be viewed by individuals or by groups depending on need.

An additional type of multi media program will be created to promote ICT in general and sponsors will be enlisted to generate funds to cover costs. This program can be used at schools, club meetings or other public gatherings to promote interest in ICT.

There will also be a multi media program developed to highlight the capabilities of the ICT and Management Awareness Unit. This will be used as part of a promotional program to sell the services of the Unit in the development and presentation of custom awareness and specific targeted training activities to meet the needs of specific clients.

This activity will initially be funded at 100% for the first two years and then be reduced by 25% each year until the project end. This strategy will allow the Unit to build up an operating fund in the initial phase of the project but will also require that it assume a growing proportion of its costs throughout the project.

Outcome

Business management in small, medium and large businesses improved; ICT capabilities in management improved; higher skilled workforce and more competitive businesses.

Inputs

Seven multimedia notebook computers with software.

Two multimedia workstations with software.

Three compact multimedia video projectors.

Materials for 12 workshops for fifty participants per year.

Appropriate ICT, business management, and logistics training for seven people.

Transportation

Office space and Office supplies

Critical Assumption

Private sector businesses, especially multinationals, will partner with or sponsor program activities.

ICT Awareness Campaign

A Public communication campaign will be designed and implemented which will help promote the use of ICT in both the public and private sectors in Egypt. The emphasis however will be primarily in the private sector. A large part of the focus will be on SME's and the fostering of entrepreneurial activity related to ICT. The project will be staffed initially by a project manager with a specialty in marketing, a communication campaign specialist with multi media experience, and a logistics specialist. The priority for this group will be to carryout a social marketing study focused on the following topics:

- Knowledge and perceptions about ICT
- SES (Socio-Economic Status)
- Gender and age
- Services the campaign could offer (sustainability)
- Image and slogan campaign could use

Based on this study a campaign business plan will be created to guide the development and presence of the campaign in the Egyptian business community. This study will also serve as a base line to measure the growth of knowledge and awareness in ICT in Egypt and will be applied at two year intervals throughout the project.

The campaign would host the Targeted Awareness Activities and Workshops sub-activity previously mentioned in this paper as well as develop a variety of other activities. Some of the activities to be developed under a campaign of this nature may include:

- A news letter on ICT distributed to interested individuals in the business community
- An annual "Successful Business" award. Business of the month and Business of the year
(If done carefully these can be fund raisers)
- Posters and other collateral
- A radio talk show (with advertising space) aired during commute time
- Television commercials
- Guest appearances on TV news and talk shows
- Newspaper column on business Q&A
- Website with links to other Egyptian businesses on-line (businesses pay to be registered with a link and for that get one or two spotlight articles written on them during the year)
- Participation in traditional events such as fairs, parades or others
- Meetings with the President (publicized to take full advantage of political support)
- Meetings with Ministers
- Meetings with prominent businesspersons
- Meetings with international personalities
- Appearance at workshop events
- Appearance at events sponsored by public and private sector
- Appearance at private business events
- Website design services (funds generator)
- Other activities as appropriate

The face of the campaign will be the "Personality" created through the social marketing study. Some of the characteristics the personality possesses may include: Success; future oriented; internationalism; family; or others to be determined by the social marketing study. The campaign will have one face and although the newspaper column, the radio talk show or other activities (even guest appearances) may be contracted out, they will be done under the name of the personality and the campaign. The goal of the campaign will be to give an enviable personality to "success" and to give business people something to strive for. It is important that this image be credible and consistent.

To illustrate the probable success of this approach, reference can be made to an interview with a local Awareness Officer working with a business related NGO. At first his comment was that a mascot for a campaign seemed juvenile. He was then asked to close his eye and think of a successful businessperson and describe him. His first comments were ...'someone who is international, runs his own business and travels'. Then he was asked, "No, what does he look like?" He opened his eyes and with a big smile said, "Omar Sharif" He then became very excited about the possibility of using Omar Sharif or finding a similar figure to represent an ICT campaign. An important element for success in this campaign will be to identify the personality and then be consistent.

It will be important for the campaign to be always aware of opportunities to generate funds through partnerships and services. Ultimately, activities of the campaign will continue only if they are successful in achieving sustainability. By the same token it is important that the campaign not get the reputation of paying top dollar for everything since this will set a precedent which will be

impossible to overcome. Initially the campaign should have a broad presence. Over time this should be reduced to activities which are sustainable and which generate some additional funds for High profile appearances.

Outcome

A positive business environment which embraces success and acknowledges progress, this will create competition to be successful.

Inputs

Multimedia workstation with appropriate software (Graphics package, Page set-up/web publishing software and others as appropriate), digital camera and scanner. (\$7,000)

Two additional workstations, one capable of running statistical analysis software. (\$3,000 ea.)

Color printers for each computer (ink jet). (\$300 ea.)

Laser printer. (\$3,000)

Statistical analysis package. (\$2,000)

Office suite for each computer. (\$500 ea.)

Office space and office supplies. (5 years)

Transportation.

Training in state of the art website design for staff.

Training in the application and analysis of social marketing studies for at least two people.

Critical Assumptions

The ICT Federation is established as a functioning and credible body. If not then a suitable home in an already existing NGO be found.

4. Recommendations on modes of Implementation

A primary contractor will take on the role of incubating the awareness component of this RP. The contractor will use expats in counterpart positions for project manager, campaign manager, and workshop manager. These people will have specialties in their respective areas which will allow them to guide and train their national counterpart and eventually leave them in charge of the program. The Campaign and the Workshops activities can be bundled together and attached as a working unit to the Federation if it is established. If not then another NGO related to business such as the EHITA, AMCHAM, ABA or other appropriate body will become the host.

The Support to Libraries Sub-Activity will be on a grants basis with the requirement that the libraries receiving the support form a self help network among themselves. The grants will be managed by the primary contractor and an appropriate Egyptian public sector counterpart. This could be the Libraries program under the First Lady, MOCIT, or another agency or program.

Similarly, the Telecenters Activity will be managed as grants to local NGO's who are counterparts to a U.S. NGO. The U.S. NGO will manage this program. A possible U.S. NGO who has expressed interest in this type of project is Save the Children.

5. Results Level Indicators of Performance

- 1) Demand for services supplied by the project will increased to a level at which sustainable activities and the project continue after end of funding period.
- 2) A statistically significant change takes place in regards to Knowledge and awareness of ICT over the course of the project measured by social marketing surveys compared to baseline studies.